

Claims

1. A valve for enabling release of pressurized steam from a pressure vessel, the
5 valve comprising a displaceable closure member which, in its closed disposition, is maintained in said closed disposition by exposure to the pressure of the steam within the pressure vessel.
2. A valve according to Claim 1, wherein the closure member is displaceable
10 between said closed disposition and an open disposition by a double-acting actuator.
3. A valve according to Claim 2, wherein said double-acting actuator comprises
an air-driven piston/cylinder device.
- 15 4. A valve according to Claim 2 or Claim 3, wherein the closure member is mounted at one axial end of a spindle extending between the closure member and said actuator.
- 20 5. A valve according to Claim 4, comprising a valve body having gland packing through which said spindle extends.
6. A valve according to any preceding claim, wherein the valve member is mounted for substantially metal-to-metal contact with a valve seat portion, without
25 interposition of any sealing element.
7. A valve according to any preceding claim, wherein the closure member has a face portion which is interchangeably secured to the remainder of the closure member.
- 30 8. A valve according to any preceding claim, comprising a seat portion for engagement by a face portion of the closure member, the seat portion being interchangeably secured to a valve body portion in the seat region.

9. A valve according to any preceding claim, wherein the closure member is mounted for substantially vertical displacement between said closed disposition and an open disposition thereof.
- 5 10. A valve according to any preceding claim, wherein the nominal flange size of the valve body at the steam exit side is substantially greater than the nominal flange size of the valve body at the steam entry side.
- 10 11. A product treatment system comprising a valve according to any preceding claim, wherein the valve is mounted for release of pressurized steam into an expansion region substantially at the point of entry of steam into said expansion region.
- 15 12. A product treatment system comprising a pressure vessel, an expansion region for receiving pressurised steam discharged from the pressure vessel at the end of a steam treatment phase of said product treatment, and a solids trap, said solids trap being in communication with the expansion region to receive steam at a substantially reduced pressure as compared with the steam pressure on initial entry into the expansion region, along with any entrained solid matter.
- 20 13. A product treatment system comprising a pressure vessel, an expansion region for receiving pressurised steam discharged from the pressure vessel at the end of a steam treatment phase of said product treatment, and a solids trap, said solids trap being in communication with the expansion region to receive steam at a substantially reduced pressure as compared with the steam pressure on initial entry into the expansion region, along with any entrained solid matter, the system further comprising a valve according to any of Claims 1 to 10 for enabling release of pressurised steam from said pressure vessel into said expansion region.
- 25 14. A product treatment system according to Claim 12 or Claim 13, wherein said solids trap acts in a cyclonic manner.
- 30 15. A product treatment system according to any of Claims 12 to 14, comprising an exhaust stack communicating between said solids trap and atmosphere, said

stack including noise reduction means.

16. A product treatment system according to Claim 15, wherein said noise
reduction means is defined by a stack region of enlarged cross-section transverse to
5 the direction of exhaust flow, said enlarged cross-sectional region comprising a
plurality of spaced-apart perforated plates each disposed transversely to said
direction of exhaust flow.
17. A product treatment system according to any of Claims 12 to 16, wherein said
10 pressure vessel is rotatable.
18. A product treatment system according to any of Claims 12 to 17, wherein said
product treatment comprises steam peeling.